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State of Utah

DEPARTMENT OF NATURAL RESOURCES

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Outgoing
C0410002
#3370
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October 1, 2009

Ken May, General Manager
Canyon Fuel Company, LLC
597 South SR24
Salina, Utah 84654

Subject: Conditional Approval of SUFCO Mine, C/041/0002, New Sedimentation Overflow Pond, Task ID #3370

Dear Mr. May:

The above-referenced amendment is conditionally approved upon receipt of 8 clean copies prepared for incorporation. Please submit these copies by October 26, 2009. Once we receive these copies, final approval will be granted, at which time you may proceed with your plans.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the Mining and Reclamation Plan. A Technical Analysis is enclosed.

If you have any questions, please call me at (801) 538-5262 or Dave Darby at (801) 538-5341.

Sincerely,

James D. Smith
Permit Supervisor

JDS/DWD/sqs
cc: Price Field Office
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State of Utah



Coal Regulatory Program

SUFCO Mine
Canyon Fuel Company, LLC
Technical Analysis Task ID #3370
Sediment Control Overflow Pond
September 29, 2009

TECHNICAL ANALYSIS DESCRIPTION

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The Division ensures that coal mining and reclamation operations in the State of Utah are consistent with the Coal Mining Reclamation Act of 1979 (Utah Code Annotated 40-10) and the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). The Utah R645 Coal Mining Rules are the procedures to implement the Act. The Division reviews each permit or application for permit change, renewal, transfer, assignment, or sale of permit right for conformance to the R645-Coal Mining Rules. The Applicant/Permittee must comply with all the minimum regulatory requirements as established by the R645 Coal Mining Rules.

The regulatory requirements for obtaining a Utah Coal Mining Permit are included in the section headings of the Technical Analysis (TA) for reference. A complete and current copy of the coal rules can be found at <http://ogm.utah.gov>

The TA is organized into section headings following the organization of the R645-Coal Mining Rules. The Division analyzes each section and writes findings to indicate whether or not the application is in compliance with the requirements of that section of the R645-Coal Mining Rules.

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This TA was updated as a result of an change to the permit. The original application was received on June 24, 2009 (Task 3341) for a new sediment control overflow pond. The application is a minor revision to the current mine permit. The new construction is 4.6% or the already approved disturbed area acreage. The amendment was reviewed reviewed by the DOGM coal staff and found deficient. It was returned to the operator. Response to deficiencies (Task 3370) was received on August 27, 2009. The overflow pond will be constructed on USFS land under a special use permit (p. 1-10) and will add 2.3 acres to the mine site disturbed area (pg 1-11). The pond area is located 800 ft. downstream of the existing mine facilities.

The purpose of the new overflow pond is to allow for increased volume, flood control and extra sediment settling from the disturbed mine facilities and to capture run off from the 10-year, 24-hour storm event. The new overflow pond will also allow runoff to bypass the primary sediment pond thereby facilitating regular sediment removal and maintenance of the primary pond.

The landowner of the site is the U.S. Forest Service, Fish Lake National Forest. NEPA was conducted on the permit and the project was signed off by Fred Houston, District Ranger.

This amendment is recommended for approval.

ADMINISTRATIVE INFORMATION

OWNERSHIP AND CONTROL

Regulatory Reference: R645-301-112

Analysis:

The application includes no changes to this section. All land within and contiguous to the proposed addition to the permit area is owned by the United States, so no updates to the land ownership section are needed.

Findings:

Information provided in the application is considered adequate to meet the requirements of this section of the regulations.

RIGHT OF ENTRY

Regulatory Reference: R645-301-114

Analysis:

The Mining and Reclamation Plan contains a copy of the lease, which was issued by the Bureau of Land Management to Canyon Fuel Company on September 1, 1999. The application text also includes a new legal description and acreages for the lease. This satisfies the requirements of this section of the regulations.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations. In the lease area, surface and mineral rights are not severed.

PERMIT TERM, INSURANCE, PROOF OF PUBLICATION, AND FACILITIES OR STRUCTURES USED IN COMMON

Regulatory Reference: R645-301-116, R645-301-117

Analysis:

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The proposed revision will not affect the permit term. The insurance policy currently on file with the Division meets regulatory requirements.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

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ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR Sec. 783. et. al.

GENERAL

Regulatory Reference: 30 CFR Sec. 783.12; R645-301-411, -301-521, -301-721.

Analysis:

As previously noted, the Permittee is proposing to construct a secondary sediment catchment below the Mine facilities pond in East Spring Canyon to increase sediment storage volume, improve discharge water quality, and allow for cleaning of the upper pond when required.

The Permittee has submitted text revisions to include the new pond in the mining and reclamation plan as follows; Chapter 5, pages 5-2, 5-3, 5-14, 5-56, 57, 58 and 5-59. Page 5-2 contains a minor revision, which adds Plate 5-2B to this MRP. Plate 5-2B shows the location of the proposed new sedimentation overflow pond, which is being permitted (Task ID # 3341).

Page 5-3 contains two minor revisions to the Chapter 5 text, one of which pinpoints the location of the new pond as 800 feet down gradient of the existing main facilities area sediment control structure.

Findings:

The Permittee has submitted sufficient information for this section.

PERMIT AREA

Regulatory Requirements: 30 CFR Sec. 783.12; R645-301-521.

Analysis:

The permit boundaries are shown on Plate 5-6, Land Ownership and Permit Area Map. The plate has a scale of 1" = 2000'. It shows the existing permit boundaries and the proposed Pines Tract expansion.

On Page 1-33 through 1-35, the Permittee lists the legal descriptions for the federal leases and fee ground. The Permittee also states that 13.03 acres under U.S. Forest Service special use permits are included in the permit and disturbed areas.

Findings:

The Permittee has met the minimum requirements of this section.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.12; R645-301-411.

Analysis:

The current mining and reclamation plan indicates the permit area contains no cemeteries, public parks, or units of the National System of Trails or the Wild and Scenic Rivers System, and none are identified in the application. Therefore, it can be assumed none are in the proposed addition to the permit area.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.18; R645-301-724.

Analysis:

Climatological information is provided in Chapter 7, page 7-23. Data has been collected at the mine surface facilities since July 1996. Normal annual precipitation at the mine is about 18 inches per year.

Findings:

The Permittee has submitted sufficient information for this section.

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.19; R645-301-320.

The MRP, appendix 3-9 contains a discussion of plant communities in the lease area, including dominant species and approximate percentage of the area covered by each community. The

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current mining and reclamation plan contains quantitative vegetation information for several areas within the permit area, not just the surface facilities area. The vegetation communities sampled include at least three that are similar to the mountain mahogany/Salina wild rye community in the breakout area, including ponderosa pine/manzanita/mountain brush, mountain brush, and pinyon/juniper/mountain mahogany.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21; R645-301-322.

Analysis:*Wildlife Information*

The MRP, Appendix 3-9 contains a report with a discussion of wildlife use of the area. According to this report, there are about 80 species of mammals, 130 species of birds, eight amphibians, and 17 reptiles that may occur in the Pines Tract area.

Plate 3-2 shows elk ranges, and Plate 3-3 shows deer ranges and raptor nests.

Threatened and Endangered Species

There are no threatened or endangered species identified for the overflow pond area.

Bald eagles could occasionally pass through or roost in the area, but the mine is unlikely to have any negative effects.

According to the EIS, the willow flycatcher has recently been found on the Wasatch Plateau north of the mine area, but it is not known if this was the southwestern willow flycatcher subspecies. The Forest Service reviewed habitats in the project area for the EIS and determined that "... while some habitat does exist in the area, this habitat is not suitable as willow flycatcher nesting habitat."

Spotted bats, northern goshawks, and northern three-toed woodpeckers have been found in the project area, and the Pines Tract contains potential habitat for flammulated owls. All of these are Forest Service Region 4 Sensitive Species.

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The Forest Service commented verbally that the sage grouse is a Forest Service Region 4 sensitive species that should be included in the list in Table 3-3; however, the Permittee indicated in their cover letter for the March 9, 2000, submittal that the most current list of sensitive species does not include the sage grouse. Once it is officially listed, the plan will be modified accordingly.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.21, 817.200(c); R645-301-411, -301-220.

Analysis:

An Order I soil survey was conducted for the existing sediment pond location. Soil sample sites 24 and 20 described in Vol. 4, App. 2-2 represent either side of the drainage upstream approximately 900 ft. upstream from the overflow sediment pond location (Sec. 7.3.2.2). Sample site 24 was described as severely eroded 50% Type W soil (loamy, skeletal, mixed frigid Typic Xerorthent); 20% rock outcrop; 10% moderately deep Xerorthent and 10% shallow Xerorthent soil. Sample site 20 is described as 70% well drained soil of the Kilfoil series (clayey, skeletal, mixed, xeric, Mollic Haploxeralfs) and 10% shallow soils described as loamy- skeletal, mixed, frigid, shallow Lithic Xerorthents; and 15% rock outcrop. The site description for sample site 20 indicates on p. 33 that the surface 10 – 12 inches is sandy loam above a clay loam topsoil. On p. 35, the consultants report that 15 inches of topsoil could be salvaged and stored from areas represented by sample site 2.

The Order III soil survey map, Plate 2-1, does not extend to the location of the overflow sediment pond, however, the Order III soil survey indicates that soil in the drainage upstream of the overflow sediment pond is Type T, loamy skeletal, mixed, frigid Calcixerollic Xerochrepts. Type T soil is described in App. 2-2 and in Sec. 2.2.2.3 of the MRP. Soil Type T is found on very steep slopes (>60%) with rock outcrops comprising one third of the map unit. The vegetation type is pinyon/juniper. Both Type T soils are described as having a surface layer of 2 – 8 inches of coal and road debris on the surface.

Order III survey Map Unit R describes the soils in the drainage upstream from the proposed overflow pond disturbance. "This is a complex consisting of 50% of the soil described in Unit O, 25% of a shallow phase of the soil described in Unit N, 10% rock outcrop and 5% each of the soils described in Units C and H." These soils > 35% rock fragments in common, and a surface layer that is 12 – 25 inches thick with paralithic contact at 20 – 50 inches below the surface.

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Applying the available information to the overflow pond suggests that in general a minimum of 12 inches of soil could be salvaged from the site before disturbance. The salvaged soil will likely have a high percentage of stones and rock, which is highly desirable for the channel reclamation. Prior to disturbance, the Permittee will conduct a site specific soil survey (Sec. 2.2.2 p. 2-3). The overflow pond soil survey will be added to Appendix 2-2 (Sec. 2.2.2 p. 2-8). The information from the soil survey will determine topsoil salvage depth.

Plate 5-2Bv17 outlines several pre-SMCRA coal dumps in the vicinity of the proposed overflow pond and topsoil storage area.

Findings:

The information provided meets the regulatory requirements of this section.

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.22; R645-301-411.

Analysis:

Plate 4-1 shows land uses in the area. The land is managed by the Forest Service for multiple uses, including, timber, grazing, wildlife, and mining. These are the same uses identified as occurring in the current permit area.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

ALLUVIAL VALLEY FLOORS

Regulatory Reference: 30 CFR Sec. 785.19; R645-302-320.

Analysis:

The Permittee has provided alluvial valley (AVF) floor characterization in Plate 9-1 and described the potential for flood irrigation of lands in the MRP. Hydrologic resource information has been reviewed concerning the potential for AVFs existing within and down stream. AVFs potential exists at the mouth of the large canyons, several miles away from the project area. Previous assessments conclude there will be no impacts from disturbance of the facilities. Emplacement of the sedimentation overflow pond will help ensure that fact. More sediments and

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riparian areas are present in Muddy Creek Canyon, however the canyon is still constricted and wide alluvial plains do not exist. AVF do not exist in the since of providing suitable flood or subirrigation within the canyons.

Findings:

The Permittee has provided sufficient information to address this section.

PRIME FARMLAND

Regulatory Reference: 30 CFR Sec. 785.16, 823; R645-301-221, -302-270.

Analysis:

The NRCS prime farmland determination is found in Appendix 2.1. No prime farmland exists within or adjacent to the PTL.

Findings:

The information provided meets the regulatory requirements of this section.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.22; R645-301-623, -301-724.

Analysis:

Geological resource information for the Sufco Mine is supplied in Chapter 6. The Permittee presents the regional setting in which the stratigraphy and structural geology of the proposed mine area are described. No igneous or metamorphic units are found in the area. The formations exposed are sedimentary (Plate 6-1 and Figure 6-1) and are mostly of Cretaceous Age. The Mancos Shale is considered the base layer. It is a very thick formation in this area and consists of massive beds of sandstone and shale. The shale layer acts as an aquitard restricting downward flow of groundwaters.

The Blackhawk Formation bares the coal for this mine. On the Sufco Mine property the Blackhawk Formation varies in thickness from 70 to 830 feet, generally thickening northeastward. Three coal seams with thickness greater than five feet (the Upper Hiawatha Seam, and two other of lesser importance: the lower Hiawatha Seam and Duncan Seam) are found in the Blackhawk Formation within the mine property (Figure 6). The upper Hiawatha Seam is the only one of the three, which is minable within most of the mine property boundary. The seam has a thickness of between 9 to 18 feet over most of the property, but thins due to mid-seam parting in the southeastern

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portion of the property that it becomes unminable The Duncan zone may correlate with the Muddy Coal Seam, which occurs north of the SITLA lease.

The mine area lies midway between the Joe's Valley-Paradise Fault Zone to the east and the Musinia Fault zone to the west. Rock units in the mine area strike roughly N40degrees E and dip 1 to 2 degrees (about 250 feet per mile) to the northwest (Plate 6-1).

No underground mining will take place at the overflow pond area.

Findings:

The information provided by the Permittee is considered adequate to meet the minimum requirements of the Geologic Resource Information section.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:*Sampling and analysis.*

The Permittee had conducted surveys on streams, springs, ponds and wells. Sampling will continue throughout the life of the mining operation, through reclamation. Water discharges from the overflow pond will be monitored and reported to the Division of Water Quality and DOGM.

Surface-water information.

Surface water sources are identified in the MRP. The Permittee has mapped streams, springs and man-made ponds. Most of the stream flow is attributed runoff from snowmelt or rain. Spring flow contributes the most to the baseflow of the streams in later summer and fall months.

Baseline cumulative impact area information.

The Permittee discusses potential impacts in Chapter 7, Page 7-25. Has identified the potential subsidence limits, Plate 5-10. Potential impacts are discussed in Appendix 7-18.

Findings:

The Permittee has supplied sufficient information to satisfy the requirements of this section.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Affected Area Boundary Maps

Plate 5-5 shows the affected area boundary. Several other maps have been submitted, such as Plate 7-2, which shows the topography, mine plan area, the proposed mine layout, structural features, hydrologic, archeological sites and wildlife habitat. Plate 5-10 identifies the extent of expected subsidence. In recognition of the Record of Decision by the USFS, the Permittee have identified the West Fork of the East Fork of Box Canyon as a non-subsidence area.

Archeological Site Maps

The report on the archaeological resources contains maps showing where these sites are located. The information must remain in the confidential file.

Monitoring Sampling Location Maps

The Permittee has supplied surface and groundwater monitoring location maps. Plate 7-3 identifies spring, stream and well monitoring locations. All sites are accompanied with an elevation identification.

Permit Area Boundary Maps

Several maps have been submitted, such as Plate 7-2, which shows the topography, mine plan area, the proposed mine layout, structural features, hydrologic, archeological sites and wildlife habitat. Plate 5-10 identifies the extent of expected subsidence.

Surface and Subsurface Ownership Maps

The Permittee has identified the surface and subsurface ownership on Plate 5-6. The surface is USFS managed land the subsurface is federal coal reserves. Plate 5-6 shows the surface and subsurface ownership.

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Vegetation Reference Area Maps

The reference area is shown on a map in the current mining and reclamation plan.

Well Maps

Water monitoring wells are located on Plate 7-3.

Contour Maps

Several maps such as Plate 7-2 have incorporated contour intervals on the maps.

Findings:

The Permittee met the minimum requirements of this section.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR Sec. 784.2, 784.11; R645-301-231, -301-526, -301-528.

Analysis:

General

The Permittee has identified probable hydrologic consequences of the mine, which are described in Appendix 7-18, Probable Hydrologic Consequences. Development of the overflow pond will require a minor change to the CHIA.

Facilities and Structures

Mining is planned under most existing structures which include archeological sites, dirt roads, fences and runoff ponds and stock watering troughs. The Permittee discussed potential impacts to surface structures and hydrologic sources and concluded that adverse impacts will not occur.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: R645-301-140

Analysis:

There are no public parks or historic places on the overflow pond area.

Findings:

Information provided in the proposal is considered adequate to meet the requirements of this section of the regulations.

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EXISTING STRUCTURES:

Regulatory Reference: 30 CFR Sec. 784.12; R645-301-526.

Analysis:

There are no existing structures where the sediment overflow pond is proposed.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR Sec. 784.26, 817.95; R645-301-244.

Analysis:

The Permittee has proposed no activities that should require changes to the Air Quality Approval Order, so no changes are needed to this section of the mining and reclamation plan.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

COAL RECOVERY

Regulatory Reference: 30 CFR Sec. 817.59; R645-301-522.

Analysis:

The Permittee has supplied maps, plans to show where mining will take place. This amendment pertains to surface activities and does not influence coal recovery.

Findings:

The Permittee met the minimum requirements of this section.

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SLIDES AND OTHER DAMAGE

Regulatory Reference: 30 CFR Sec. 817.99; R645-301-515.

Analysis:

The existing plan is considered adequate.

Findings:

The Permittee met the minimum requirements of this section.

FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

Analysis:

Protection and enhancement plan.

The existing mining and reclamation plan contains commitments to protect wildlife from the adverse effects associated with mining. Underground mining is likely to have little if any effect on most species on the plateau, including deer, elk, and sage grouse.

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Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Soil salvage operations are described for new overflow sedimentation pond in Sec. 2.3.1.1 of the MRP. The MRP states that the A & B horizons will be stockpiled together or separately and a third stockpile of boulders will be in an adjacent location. The stockpiles will be graded to a 3h:1v slope and seeded.

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In Sec. 2.2.4 the Permittee states that out slopes of dams will be used as substitute topsoil at final reclamation. During a site visit on September 3, 2009, Mike Davis explained that the overflow pond dam will be constructed from a former road pad that was constructed in the early 1980's to clear mine waste from the mine access road out slopes, at the request of the USFS. In the last 20 years this pad has become well vegetated and may also provide a source of suitable substitute topsoil. The out slope of the pond will be used in reclamation of the overflow pond. As described in Sec. 5.4.2.2, p. 5-68A.

The overflow pond topography is shown on Plates 7-4A and 7-5A. The area to be affected appears to be approximately 1.5 acres. On page 2-17, the application states that the A and B horizon to a depth of 12 inches will be salvaged and separately stockpiled. The stockpile size is based upon an estimate of 12 inches of topsoil salvage over 1.14 acres for a total of 1,850 cu yds (Sec. 2.3.1.1, p. 18). The stockpile will occupy 0.141 acres (Sec. 7.4.2.1).

Topsoil will be temporarily stockpiled along the length of the bypass culvert installation. The stockpile will be replaced after culvert installation and the soil will receive final reclamation seed treatment (Section 2.3.1.1, p. 18). The application states that topsoil salvage will be directed by a construction supervisor or trained representative. As built volumes of topsoil salvaged and stored will be reported in an as-built addendum (Section 2.3.1.1, p. 18).

Sec. 2.3.1.4 of the MRP describes the construction, modification, use and maintenance of topsoil storage piles. The information states that the stockpiles will be placed on a stable site, and protected by vegetation (seed mix minus shrubs and trees) and by a silt fence below the topsoil stockpile. The overflow pond stockpile is shown on Plate 7-4A. This map has 5 ft contours and the location of the topsoil stockpile will be on an existing 4h:1v slope. The stockpile will have an out slope that rises 52 ft. horizontal :20 ft. vertical or 2:1 slope at the steepest face, which is also the south face. The overflow pond stockpile will be protected with a berm and silt fencing (Sec. 7.4.2.1). The design installation for the berm's spillway is presented on Plate 7-5C. As built volumes and construction details are requested.

Findings:

The information provided in the MRP meets the topsoil/subsoil operation requirements of the Regulations or the commitments stated in the MRP.

VEGETATION

Analysis:

Chapter 3 of the current mining and reclamation plan contains a plan for interim revegetation that is adequate for the proposed overflow pond.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

Analysis:

Road Systems

All roads within the SUFCO Mine disturbed area boundaries are ancillary roads, with the exception of the Sevier County road, which is the surfaced / primary coal haul access route. The surfaced extension of this road between the access control gate and the truck loading facility within the disturbed area boundary is the only primary road. The new road which must be developed to access the site of the new sedimentation overflow pond will be a dirt surface road.

Plans and Drawings

In order to access the location for the new sedimentation overflow pond, it will be necessary to construct a 300 foot ancillary road from the lower Quitcupah Canyon road to the location of the impounding embankment.

All roads used by SUFCO Mine were (are / PHH) designed in accordance with applicable county, UDOT, and U.S. Forest Service standards (See page 5-59, section 5.3.4 Roads).

“All ancillary roads are unimproved dirt roads”, (See same reference).

Plate 7-4A shows the plan view of the new pond and its location relative to other surface features which have already been implemented by the SUFCO Mine.
Performance Standards.

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Plate 7-5A contains a cross-section / description of the drainage control ditch which will be constructed parallel with the new ancillary road which accesses the overflow sedimentation pond.

Primary Road Certification

The new road will be an ancillary dirt surface road, which does not require a P.E. certification.

Plate 7-5A is certified by a Utah registered professional engineer and meets the requirement of R645-301-512.120, Surface Facilities and Operations.

Other Transportation Facilities

The requirements of this section are not applicable to this permit amendment.

Findings:

The Permittee met the minimum requirements of this section.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

The Permittee (Canyon fuel Company, LLC / SUFCO Mine) is proposing to construct a secondary impoundment below the main mine site facilities pond in East Spring Canyon. This construction will include a bypass diversion, which will allow the secondary to treat runoff, which would normally report to the primary cell during cleanout of the upper pond. This cleanout process is described on page 7-56, Chapter 7 of the Task ID # 3341 proposal.

The application states that the proposed new sediment overflow pond is within the boundaries of the hydrologic basin for which an existing cumulative hydrologic impact assessment (CHIA) has been prepared. Therefore, a separate CHIA is not required.

Water quality standards and effluent limitations.

The Permittee plans to maintain water quality standards by employing sediment control structures on disturbed areas and settling in-mine waters prior to their discharge. The main

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facilities sediment control structure has an approved UPDES discharge outfall, which is permitted through the Utah Division of Water Quality (UPDES point 002). The new overflow sediment pond will have the capability of operating in series with the mine yard concrete sediment trap, or the primary sediment pond, or both. The outfall (discharge point) for the new mine sedimentation overflow pond will be located differently from the upper pond outfall. Therefore, it must also have a permitted outfall location through the Utah DWQ.

Stream buffer zones.

The Permittee has implemented stream buffer zones along perennial reaches.

Diversions: General

All diversion structures are listed on pages 7-57, 7-58 and 7-58A of the application. Four new diversion channels have been created to redirect undisturbed drainage from the east and west sides of the new overflow pond. The overflow pond channels are designed to accommodate the 10-year, 6-hour storm.

Two additional culverts are proposed: A culvert from the existing primary sediment pond will be used to divert runoff to the new overflow pond and allow for drainage and sediment removal from the primary sediment pond. A second culvert installed immediately upstream of the proposed sediment overflow pond will allow runoff from the undisturbed watersheds to bypass the overflow pond and discharge immediately downstream.

Diversions: Perennial and Intermittent Streams

Page 7-65 of the application states that the overflow pond will be located within a perennial stream channel. R645-301-742.221.2 states that a sediment pond shall not be located within a perennial stream channel unless approved by the Division. A 66-inch culvert is to be installed underneath the pond directing undisturbed drainage from East Spring Canyon and Mud Spring Hollow immediately upstream of the overflow pond. The culvert is designed to safely convey peak flow from the 100-year, 6-hour storm and discharge immediately downstream of the overflow pond. Given that the culvert is equipped to handle the capacity of a 100-year, 6-hour storm event, approval is granted to allow for the sediment pond to be located within the perennial stream channel.

Diversions: Miscellaneous Flows

One natural seep was noted on the west slope of the proposed overflow sediment pond. According to Plate 7-4A included in the application, groundwater from the seep will be directed via a culvert and discharged to the outfall of the overflow pond.

Diversions: Ditches

Temporary diversion channels are required to safely pass the peak flow runoff from the 10-year, 6-hour precipitation event in accordance with 742.323. On page 7-78 of the application, it states that the channels to be constructed on the east and west flanks of the overflow sediment pond were designed for the 100-year, 6-hour storm.

Sediment Control Measures

The Permittee has met the requirements of R645-301-532,742.120. The Permittee has provided a discussion of how sediment from the disturbed area will be controlled during the construction of the new overflow sediment pond.

Page 7-63 of the Task ID #3341 application describes the topsoil pile which will be constructed as part of the construction of the new mine overflow sedimentation pond. The storage pile will be an alternate sediment control area which utilizes containment berms and silt fence material to treat runoff reporting off this disturbed area. The disturbed area of the overflow pond topsoil stockpile is 0.141 acres.

Siltation Structures: Sedimentation Ponds

The Task ID # 3341 proposal was submitted in order to construct an additional pond below the existing Mine site sediment pond in East Spring Canyon. This new impoundment will be plumbed in order that it may operate independently of, or in series with, the upper pond, which has a permitted UPDES discharge point. The new overflow sedimentation pond is designed to retain sediment from the disturbed mine facilities and treat the runoff from the 10-year 24-hour event. "The overflow pond is designed to allow for flood control and sediment settling while the primary sediment pond is being drawn down for sediment removal. A series of canal boxes with valves will allow the primary sediment pond to be bypassed for draw down, sediment removal, and maintenance," (See page 7-60 of the Task ID 3341 application). "The overflow pond was constructed to allow for continued compliance with State and Federal regulations", (See page 7-64, section 7.4.2.2 Siltation Structures).

Siltation Structures: Other Treatment Facilities

The two topsoil storage piles associated with the upper pond (0.105 acres) and the new overflow sedimentation pond (0.141 acres) will utilize containment berms and silt fences to capture and treat intercepted precipitation reporting from the soil piles. Both areas are alternate sediment control areas, (refer to Page 7-63 in the TID # 3341 application).

The new topsoil storage pile has a design for the retention berm, as shown in Appendix 7-23. Berms will be constructed with 1H:1V side slopes.

Discharge Structures

As stated on Page 7-67A, Chapter 7, of the Task ID # 3341 application, **Dewatering Device**, "the overflow pond dewatering device is designed to decant at the 60 % sediment level, 7,243.62 feet. Water will be discharged from the pond in accordance with UPDES guidelines".

The primary spillway detail is shown on Plate 7-5A. The primary spillway consists of a 24 inch corrugated metal pipe riser, which is set to discharge at elevation 7252.5 feet. An oil skimmer is attached.

A secondary open channel spillway is also included and details of this emergency overflow are shown on Plate 7-5A. The emergency spillway will be constructed to discharge at elevation 7253.0 feet. The primary and secondary spillways will be constructed in order to meet the requirements of R645-301-743.130.

Impoundments

The "new sedimentation overflow pond" being permitted as Task ID # 3341 will be the fourth impoundment permitted for the SUFCO Mine. The other impoundments are listed as follows;

- 1) Mine site sediment containment (primary impoundment).
- 2) the concrete catchment adjacent to the truck loading facilities
- 3) the waste rock impoundment and in-series decant pond (no discharge off permit area).

Ponds, Impoundments, Banks, Dams, and Embankments

Appendix 7-23 contains a slope stability analysis for the impounding embankment for the new sedimentation overflow pond. According to the analysis, nearly 5,000 various failure surfaces were evaluated for this embankment fill.

The results of the submitted analysis show that the inside slope of the impounding embankment has a factor of safety (minimum static safety factor) of 1.98.

The outside slope of the impounding embankment has a factor of safety of 1.76.

Both factors of Safety exceed the minimum regulatory requirement for impounding embankments, which has been established at 1.3 for a normal pool with steady state seepage saturation conditions (See R645-301-533.110).

Plate 7-5A shows longitudinal cross-section A-A Prime through the proposed overflow sedimentation pond. The impounding embankment will be constructed having a 2H:1V inside slope, and a 3H:1V outslope. The vertical height of the impounding embankment (as determined from A-A Prime, Plate 7-5A) is 16.5 feet. This design correlates with the shape of the embankment (2H:1V inslope, 3H:1V outslope) depicted in the slope stability analysis, Appendix

7-23.

All submitted Plates containing information relative to the overflow sediment pond design are P.E. certified by Mr. Richard B. White, Utah registered professional engineer. The slope stability analysis correlates with the submitted design and is therefore part of that design.

Findings:

The Permittee has submitted sufficient information to address this section.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Affected area maps.

The Task ID # 3341 application contains the following affected area maps;

- a) EXTENDED EAST SPRING CANYON SURFACE FACILITIES / Plate 5-2Bv17, and
- b) Plate 5-6v16, LAND OWNERSHIP, LEASE, AND PERMIT AREA MAP.

The proposed new sedimentation will be located on surface managed by the USDA / USFS Fish Lake National Forest. The new pond will require amending Special Use Permit 4109-01 RIC96, from 9.2 acres to 11.5 acres (an increase of 2.294 acres), (E-mail communication to / from Mike Davis on 7/27/2009). SUFCO submitted an application for amending this SUP to the USFS as of July 20, 2009.

Mining facilities maps.

The Permittee has submitted Plate 7-3 identifying the location of surface and groundwater monitoring locations.

Plate 5-2Bv17, Detail of East Spring Canyon Surface Facilities and Plate 5-2B Extended East Spring Canyon Surface Facilities are updated surface facilities maps. The maps show the current structures and facilities at the main SUFCo facility. In addition Table 5-4, Description of Existing Structures has been updated.

TECHNICAL ANALYSIS DESCRIPTION

September 29, 2009

The Permittee has met the requirements of R645-301-521.125 and 731.740 by providing the location of the new sedimentation overflow pond on Plates 5-2B v.17, and 7-4A, and cross-sections with design details on Plates 7-5A thru C.

Certification Requirements

All plates submitted as part of Task ID # 3341 for Chapter 5, Engineering, are certified by Mr. John D. Byers, Manager of Technical Services for the Permittee. Mr. Byers is a registered engineer in the State of Utah.

All plates submitted as part of Task ID # 3341 for Chapter 7, Hydrology, are certified by Mr. Richard B. White, a Utah registered professional engineer.

All plates meet the requirements of R645-301-512 as they relate to certification by a registered professional engineer.

Findings:

The Permittee has submitted sufficient information to address this section.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

The Permittee has provided a reclamation plan in the MRP, page 7-48. Since only a the breakout is proposed for surface disturbance, surface reclamation of the PTL is relatively small. Any surface disturbance from subsidence or affects to the hydrologic system on the PTL would be covered in mitigation during the operation phase.

Findings:

The Permittee has submitted sufficient information for this section

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The Permittee has proposed no changes to the postmining land uses of wildlife habitat and grazing.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

The revegetation plan in the current mining and reclamation plan is designed for the wildlife and grazing postmining land uses. It complies with regulatory requirements.

Findings:

Information provided in the proposal is adequate to meet the requirements of this section of the regulations.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The application states that the reclamation of the overflow sediment pond will be performed in accordance with the reclamation plan outlined in Sections 5.4 of the MRP.

RECLAMATION PLAN

However, Sections 5.4.2.2 and 5.4.2.5 of the MRP only discusses the primary sediment pond and does not specifically provide any information on the removal, timetable and reclamation relating to the overflow sedimentation pond. The reclamation information does not appear to have been updated to include the additional sediment overflow pond and the waste rock site sediment pond. The Permittee should review and update this section of the MRP accordingly and provide a reference in the application that the reclamation plan for the overflow pond has been addressed in the reclamation sections of the MRP.

Findings:

The Permittee met the minimum requirements of this section.

CESSATION OF OPERATIONS

Regulatory Reference: 30 CFR Sec. 817.131, 817.132; R645-301-515, -301-541.

Analysis:

The Permittee addressed this in the MRP. If the Permittee were to cease operations, they would notify the Division within 30 days. The Permittee would report the number of surface and underground acres disturbed and the monitoring procedures during temporary cessation.

Findings:

The Permittee met the minimum requirements of this section.

Hydrologic Information

Regulatory Reference: R645-301-760-64.

Analysis:

The application states that the reclamation of the overflow sediment pond will be performed in accordance with the reclamation plan outlined in Sections 5.4 of the MRP. The Permittee updated the MRP with added details of the reclamation of the overflow sediment pond along with a plan for interim sediment control.

Findings:

The application meet the reclamation requirements outlined in R645-301-760 thru 64.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION

OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected area boundary maps.

The permit area maps and the mine maps show the affected area boundaries. Bonded area map.

The bonded area is the permit area and is shown on several maps. Reclamation backfilling and grading maps.

The Permittee did not provide the Division with backfilling and grading maps for the portal breakout areas.

Reclamation facilities maps.

Analysis:

The Permittee does not proposes to leave any facilities. Final surface configuration maps.

The Permittee did give the Division the final surface configuration maps for the overflow pond area.

Findings:

The Permittee met the minimum requirements of this section.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

Form of Bond

The bond held by the Division to reclaim the SUFCO Mine is a surety issued by the Argonaut Insurance Company, which has an A.M. Best rating of "A" (as of June 30, 2009).

Determination of Bond Amount

The amount of bond held for the SUFCO Mine is \$ 4,439,000 (2009 dollars).

The Permittee submitted revised cost sheets (See APPENDIX 5-9) for demolition, earthwork and revegetation of the overflow sedimentation pond. An evaluation of the revised cost sheets indicates that the new overflow pond will increase the direct costs (demolition, earthwork, and revegetation) by \$ 27,470.00.

An increase in indirect costs of \$ 34,832.00 has been determined.

The total cost to the SUFCO Mine reclamation bond requirement has been increased by \$34,832.00. Total cost is now \$ 2,247,389.00.

The escalated cost for four years at an escalation factor of 0.0444 is an additional \$ 426,514.00.

The bond amount required to reclaim this site is \$ 2,674,000.00.

The bond posted for the SUFCO Mine is \$ 4,439,000.00.

Terms and Conditions for Liability Insurance

The Permittee maintains adequate general liability insurance coverage for this site, which is renewed on a yearly basis.

Findings:

The Permittee met the minimum requirements of this section.